

Education

- 2016 – Current **Doctor of Philosophy** – Psychology
Brown University in Providence, USA
PhD Supervisors: Drs. Amitai Shenhav & Michael J. Frank
- 2014 – 2016 **Master of Science** – Psychology (Cognitive and Behavioral Neuroscience)
University of Western Ontario in London, CA
MSc. Supervisor: Dr. Ingrid Johnsrude
Thesis: *The effects of concurrent cognitive load on the processing of clear and degraded speech.*
- 2010 – 2014 **Bachelor of Science (Honors) with Distinction** - Psychology
Queen's University in Kingston, CA
Honors Thesis Supervisor: Dr. Ingrid Johnsrude
Thesis: *Attention enhances phase-locking in the brainstem frequency-following response.*

Accolades & Funding

- 2019 – 2020 **Carney Graduate Award in Brain Science**, Brown University (\$55,000 USD)
- 2019 **Cognitive Science Society Travel Award** (\$500 USD)
- 2018 – 2019 **Eimas Graduate Research Award**, Brown University (\$1,000 USD)
- 2014 **Certificate of Academic Excellence**, Canadian Psychological Association
- 2011 **Summer Work Experience Program**, Queen's University (\$2,500 CAD)
- 2010 – 2014 **Dean's Honor List**, Queen's University
- 2010 – 2014 **Foresters Competitive Scholarship** (\$8,000 CAD)
- 2010 **Queen's University Excellence Scholarship** (\$2,000 CAD)

Peer-Reviewed Publications

- Ritz, H.**, Frömer, R. & Shenhav, A. (2020). Bridging motor and cognitive control: It's about time! (Spotlight). *Trends in Cognitive Sciences*. 24(1), 6–8.
- Nassar, M.R., McGuire, J.T., **Ritz, H.**, & Kable, J. (2019). Dissociable forms of uncertainty-driven representational change across the human brain. *Journal of Neuroscience*, 39(9), 1688-1698.
- Ritz, H.**, Nassar, M.R., Frank, M.J., & Shenhav, A. (2018). A control theoretic model of adaptive behavior in dynamic environments. *Journal of Cognitive Neuroscience*, 30(10), 1405-1421.

Manuscripts Under Review or In Revision

- Ritz, H.**, Wild, C., & Johnsrude, I. Parametric cognitive load reveals hidden costs in the neural processing of perfectly intelligible degraded speech. Preprint: doi.org/10.1101/2020.10.02.324509.
- Leng, X., Yee, D., **Ritz, H.**, & Shenhav, A. Dissociable influences of reward and punishment on adaptive cognitive control. Preprint: doi.org/10.1101/2020.09.11.294157.
- Rmus, M., **Ritz, H.**, Hunter, L.E., Bornstein, A.M., & Shenhav, A. Individual differences in model-based planning are linked to the ability to infer latent structure. Preprint: doi.org/10.1101/723072.

Manuscripts in Preparation

Ritz, H., & Shenhav, A. Decision dynamics under parametric cognitive control.

Peer-Reviewed Conference Proceedings

- Ritz, H., DeGutis, J., Frank M.J., Esterman, M., & Shenhav, A. (2020). An evidence accumulation model of motivational and developmental influences over sustained attention. *In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, CA. [Poster].
- Leng, X., Ritz, H., Yee, D., & Shenhav, A. (2020). Dissociable influences of reward and punishment on adaptive cognitive control. *In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, CA. [Poster]
- Ritz, H. & Shenhav, A. (2019). Parametric control of distractor-oriented attention. *In Proceedings of the 41st Annual Meeting of the Cognitive Science Society*. Montreal, CA. [Talk].
- Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. (2019). Decisions about reward and effort for the learning and control of dynamical systems. *In 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Montreal, CA. [Poster].
- Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. (2017). Behavioral evidence for PID-like feedback control. *In 3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Ann Arbor, USA. [Poster and Poster Spotlight Talk].

External Seminar Series Talks

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| Jan. 2021 | P6 Series, Princeton University. Princeton, USA. |
| Feb. 2020 | ConCats Series, New York University. New York, USA. |
| Feb. 2019 | P6 Series, Princeton University. Princeton, USA. |
| May 2018 | CBC Series, Universitat Pompeu Fabra. Barcelona, ES. |

External Lab Meeting Talks

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| Mar. 2020 | Daw Lab, Princeton University, Princeton, USA. |
| Feb. 2020 | Summerfield Lab, Oxford University, Oxford, UK. |
| Nov. 2020 | Jazayeri Lab, Massachusetts Institute of Technology, Cambridge, USA. |
| Oct. 2020 | Schultz Lab, Max Planck Institute for Biological Cybernetics. Tübingen, DE. |
| Sept. 2020 | Kool Lab, University of Washington in St. Louis. St. Louis, USA. |
| Aug. 2020 | Collins Lab, University of California Berkeley. Berkeley, USA. |
| May 2020 | McGuire Lab, Boston University. Boston, USA. |
| Apr. 2020 | Hayden Lab, University of Minnesota. Twin Cities, USA. |
| Mar. 2020 | Donner Lab, Hamburg University. Hamburg, DE. |

Conference Presentations

- Ritz, H., Hayden, B., Shenhav, A., Yoo, S.B., Optimal control of approach-avoidance dynamics.
- *Neuromatch 3.0* (2020). Online. [Talk].
- Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A., Optimal decision-making in metric space.
- *Society for Neuroeconomics* (2020). Online. [Poster and Poster Spotlight Talk].
- Ritz, H., & Shenhav, A. Parametric control of distractor-oriented attention.
- *Motivational and Cognitive Control* (2019). Berlin, DE. [Poster].
- *Control Processes* (2019). Providence, USA. [Poster].

- *Cognitive Neuroscience Society* (2018). Boston, USA. [Poster].

Rmus, M., **Ritz, H.**, Hunter, L., Bornstein, A., & Shenhav, A. Model-based decision-making is associated with structure inference ability.

- *Reinforcement Learning and Decision Making* (2019). Montreal, CA. [[Workshop Talk](#)].

- *Society for Neuroeconomics* (2018). Philadelphia, USA. [Talk by M.R.].

Ritz, H., DeGutis, J., Frank M.J., Esterman, M., & Shenhav, A. Modeling motivational influences on sustained attention.

- *Winter Conference on Brain Research* (2019). Snowmass, USA. [Poster].

- *Society for Neuroeconomics* (2018). Philadelphia, USA. [Poster].

Ritz, H., Dean Wolf, C., Frömer, R., & Shenhav, A. Quantifying the demands of value-based decision-making with short-term memory interference.

- *Cognitive Neuroscience Society* (2019). San Francisco, USA. [Poster].

Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. Behavioral evidence for PID-like feedback control.

- *Society for Neuroscience* (2017). Washington, USA. [[Nanosymposium Talk](#)].

- *New England Research in Decision-Making* (2017). Providence, USA. [[Talk](#)].

- *Brown Mind Brain Research Day* (2017). Providence, USA. [Poster].

Ritz, H., Wild, C., & Johnsrude, I.J. The effects of concurrent cognitive load on the processing of clear and degraded speech.

- *Organization for Human Brain Mapping* (2016). Geneva, CH. [Poster].

Ritz, H., Arbuckle, S., Wild, C., & Johnsrude, I.J. Enhanced recognition memory for acoustically degraded sentences.

- *Association for Research in Otolaryngology* (2015). San Diego, USA. [Podium Talk by I.J.].

- *Brain and Mind Institute Symposium* (2015). London, CA. [Poster].

Ritz, H. & Johnsrude, I.J. Attention enhances phase-locking in the frequency following response.

- *Canadian Society of Brain, Behaviour, and Cognitive Science*. (2014). Toronto, CA. [Poster].

- *McMaster University NeuroXchange Conference* (2014). Hamilton, CA. [Poster].

Competitive Research Courses

Summer 2019 **Kavli Summer Institute in Cognitive Neuroscience**, Santa Barbara, USA.

Summer 2017 **Methods in Neuroscience at Dartmouth**, Hanover, USA.

Service Roles

2020 – 2021	Departmental Colloquium Committee , Brown University
2018 – 2019	Cognition Seminar Series Organiser , Brown University
2017 – 2018	Psychology Graduate Student Representative , Brown University
2017 – 2020	APDA Optimism Walk Participant , Brown University
2017 – 2019	Brown Brain Week Participant , Brown University
2015 – 2016	Psychology Graduate Student Representative , Western University
2015 – 2016	Psychology Colloquium Committee , Western University
2013 – 2014	Psychology Undergraduate Student Council , Queen's University

Teaching

Spring 2019 **fMRI: Theory and Practice**, Brown University, TA

Spring 2018	Cognitive Neuropsychology , Brown University, TA
Fall 2017	Social Psychology , Brown University, TA
2015 – 2016	Statistics using Computers (full year) , Western University, TA
2014 – 2015	Sensation and Perception (full year) , Western University, TA
2012 – 2013	Introduction to Psychology (full year) , Queen's University, TA

Mentorship

2019 – current	Alessandra Bianco (RA)
2019 – current	Christopher Bravo (RA)
2019 – 2020	Jennifer Dzul (honors thesis: <i>Are Distractors really that Distracting? A Closer Look into Target vs Distractor Sensitivity in Older Adults</i>)
2019 – 2020	Natalie Knowles (RA)
2019	Savannah Doelfel (RA)
2017 – 2019	Allison Loynd (RA)
2017 – 2018	Milena Rmus (honors thesis: <i>Model-based decision-making is associated with structure inference ability</i>)
2017	William McNelis (RA)
2016 – 2017	Kia Sadahiro (RA)
2015 – 2016	Jessica Uthayakumar (honors thesis: <i>Consequences of acoustic degradation and semantic context on recognition memory</i>)

Pre-Graduate Research Experience

2013 – 2014	Research Assistant, Queen's University. PI: Dr. Ingrid Johnsrude
2011 – 2012	Research Assistant, Queen's University. PI: Dr. Monica Castelhana
Summer 2010	Research Assistant, Juravinski Cancer Centre. PI: Dr. Jehonathan Pinthus

Ad Hoc Reviewer

Journal of Neuroscience, Computational Brain & Behavior